Rhode Island Department of Health (HEALTH) Laboratories

50 Orms Street
Providence, RI 02904

Guide for the Collection, Submission, and Transport of Clinical Specimens

1st Edition- Written by Beverly McKenna-Sherry, December 2000
2nd Edition- Revised by Mike DiMatteo, April 2003

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INTRODUCTION

The RI Department of Health (HEALTH) Laboratories is providing this *Guide for the Collection, Submission, and Transport of Clinical Specimens* manual to describe the current diagnostic procedures performed by HEALTH Laboratories and general submission information. The manual is intended to be a useful and frequently consulted reference source. HEALTH Laboratories recommends that you make it available to those individuals in your facility responsible for submitting specimens to the HEALTH Laboratories.

As changes in procedures and protocols occur, the manual will be updated. Please continue to visit the on-line version of this manual on a regular basis to obtain the latest versions. Suggestions are always welcome. Please contact Beverly McKenna-Sherry at 222-5560 or email BeverlyM@doh.state.ri.us with your comments, questions, or suggestions.

A companion manual to this one is also available. Called *The Epidemiology and Laboratory Reporting and Surveillance Manual*, it is published and maintained by the Office of Communicable Diseases at HEALTH (click for website). This manual describes the **regulations** for reporting and submitting disease agents, and gives a summary description about specimen collection and submission methods. Like the *Guide for the Collection, Submission, and Transport of Clinical Specimens*, this manual is intended to be used by clinical laboratories to help understand the laboratory services available at HEALTH and the requirements for submitting test result reports and/or specimens. Aside from detailing important reportability and submission requirements, *The Epidemiology and Laboratory Reporting and Surveillance Manual* differs from this one in that it is presented primarily by reportable disease agents contrasted with this manual, (*Guide for the Collection, Submission, and Transport of Clinical Specimens)*, which is organized by the clinical testing services performed in specific laboratory units.

BUSINESS HOURS AND DIRECTIONS

BUSINESS HOURS: **8:30 AM to 4:30 PM**
Closed on weekends and State holidays

LOCATION: **50 Orms Street**
Providence, Rhode Island 02904

DIRECTIONS:

Boston to Providence

Rt. 95 South to Exit 23 State Offices. Turn right off the exit (Charles Street) and take the first left (across from the entrance to the Post Office). Go to the 2nd traffic light and turn right onto Orms Street. HEALTH Laboratories is the second building on the left (directly across the street from the main entrance to the Marriott Hotel).

New London to Providence

Rt. 95 North to Exit 23 State Offices. At the end of the exit ramp, turn left onto Orms Street, and cross over the Railroad Bridge. HEALTH Laboratories is the first building on the right (directly across the street from the main entrance to the Marriott Hotel).

Visitors to HEALTH Laboratories may park anywhere in the lot except parking spaces that are designated with a sign.

CONTACT INFORMATION

MAIN TELEPHONE NUMBERS **(401) 222-5600**
(401) 272-5952 (Urgent after hours)

ADMINISTRATION

Laboratory Director	**Gregory V. Hayes, DrPH**	**222-5554** gregh@doh.state.ri.us
Executive Assistant	**Carol Danho**	**222-5555** carold@doh.state.ri.us
Laboratory Administrator	**Joseph P. Catalano**	**222-5508** josephc@doh.state.ri.us
Office/Billing Manager	**Zulmira Roseman**	**222-5546** mira_roseman@doh.state.ri.us

CENTRAL SERVICES

Kits/Specimen Receiving

Supervisor	**Bill Paquin**	**222-5547** billp@doh.state.ri.us
Receiving Room		**222-5548, 5549**

Specimen Processing

Contact Person	**Gladys Weeden**	**222-5594**
Processing Room		**222-5594**

BIOLOGICAL SCIENCES

Section Chief	**Kenneth W. Jones, DrPH**	**222-5596** kenj@doh.state.ri.us

Quality Assurance Officer	**Beverly Sherry MS MT (ASCP)**	**222-5560** beverlym@doh.state.ri.us
Biochemistry		
Contact Person	**Lorraine St. Laurent**	**222-5552** lorraines@doh.state.ri.us
Laboratory		**222-5552**
FAX		**222-6985**
Bioterrorism Response/Special Pathogens		
Supervisor	**Cynthia Vanner**	**222-5599** C_vanner@doh.state.ri.us
Laboratory		**222-5585, 5586**
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Molecular Biology		
Supervisor	**Robert Ireland, Ph.D.**	**222-5598** roberti@doh.state.ri.us
Laboratory		**222-5586**
Mycobacteriology		
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Laboratory		**222-5654, 5588**

FAX		**222-5656**
Serology		
Supervisor	**Leonard LaFazia**	**222-5595** lennyl@doh.state.ri.us
Laboratory		**222-5591**
FAX		**222-5592**
Virology		
Supervisor	**Shashi Mehta Ph.D.**	**222-5639** shashim@doh.state.ri.us
Laboratory		**222-7479**

HEALTH Laboratories
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SPECIMEN SUBMISSION FORMS

HEALTH Laboratories uses three different forms for the submission of clinical specimens (click to see "clinical form.pdf", "hiv form.pdf" and "cdc form.pdf"). Use the first form, the Clinical Specimen Submission Form, for all clinical specimens except HIV specimens. Use the second form, HIV Serology Test Form, exclusively for HIV specimens. Use the third form, the Centers for Disease Control (CDC) D.A.S.H. Form, in addition to the Clinical Specimen Submission Form, only when submitting specimens that will be forwarded to CDC for testing (Laboratories or Disease Control and Prevention staffs will alert you to this). Please note that the forms accessible from this document are for display purposes only and cannot be used to submit a specimen. To obtain forms, contact the Specimen Receiving Unit at 222-5549 or, for the CDC D.A.S.H. Form only, contact Special Pathogens at 222-5585, 5586.

Clinical Specimen Submission Form: All information requested on the form must be legible; **please type or print.** ***Instructions are printed on the back of the form*****.** The following information is required to process the specimens:

1. Patient's name, address, age, and gender (age and gender are mandatory items)
2. Submitter's name and address
3. Test requested
4. Diagnosis
5. Date specimen was collected
6. Patient's signature
7. Physician's license number
8. Specimen Source
9. Patient Insurance Information

Please label each specimen with the peel off specimen identification label and place lengthwise. **Specimens without a label are unsatisfactory and cannot be tested.**

HIV Serology Test Form: HIV testing is anonymous. Specimens are identified and reported by bar code numbers. Complete all information requested on the form. Instructions are printed on the front of the form. **Remove the first label and firmly attach to the blood tube lengthwise**. Remove the second label, and give to the patient as an identifier for test results. Remove the third label and use for patient records. DO NOT remove any other label from the form. The other labels are required for tracking laboratory tests.

CDC D.A.S.H. Form: Complete all information as requested.

SPECIMEN TRANSPORT INSTRUCTIONS

Specimens may be transported to HEALTH Laboratories in several ways including the United States Postal Service, common carriers, and courier services. HEALTH Laboratories maintains courier service to each of the major community health centers and certain hospitals. Every clinical specimen submitted to the HEALTH Laboratories has the potential for transmitting disease. Specimens must be packaged to protect both the specimen and transporting personnel. Broken or leaking containers pose a safety hazard to transporting personnel and are unsatisfactory for testing.

For a detailed description of packaging and transporting instructions for clinical diagnostic specimens and infectious substances (including diagrams and flowcharts)(click here to see "Transport of Clinical Diagnostic Specimens.pdf")

BASIC REQUIREMENTS

PACKAGING MATERIALS:

- Use specimen container kits available from the HEALTH Laboratories whenever possible.
- Transport all specimens in double walled crush-proof packaging or in the special kits available for delivery by courier.
- Use appropriate slide mailing devices for transport of microscope slides.
- Use leak proof containers.
- Secure caps with waterproof tape or parafilm.
- Use polystyrene (or other insulating material) to ship frozen and refrigerated specimens.
- Use cold packs when transporting refrigerated specimens. Do not use wet ice.

TRANSPORT:

- The HEALTH Laboratories courier service has been trained to safely transport specimens and meets Department of Transportation regulations.
- If using another transporter, check shipping regulations of the specific transporter to ensure they meet Department of Transportation regulations.

UNSATISFACTORY SPECIMENS

All specimens submitted to HEALTH Laboratories will be considered unsatisfactory, and will not be processed/analyzed under the following conditions:

1. Specimen identification label not on the specimen tube
2. Blood specimens that are hemolyzed
3. Quantity is insufficient
4. Specimen container or tube broken in transit, specimen leaked, etc.
5. Specimen too old to test
6. Wrong transport media used
7. Improper specimen submitted for test requested

If any of these conditions occur, Specimen Processing staff will contact the provider by telephone on the day that the condition is discovered, or if discovered in a laboratory unit at the time of analysis, staff will report following the standard reporting method.

TEST DESCRIPTIONS AND INFORMATION

BIOCHEMISTRY		
TEST	**DESCRIPTION**	**COLLECTION & TRANSPORT KIT AVAILABLE**
Blood Lead, Screen (Children)	**Description:** Quantitative testing of lead in blood of children. Reporting toxic levels that will result in harmful effects on the developing Central Nervous System (CNS) functions and initiating follow-up by the Division of Family Health, Rhode Island Department of Health. **Specimen:** 300 µl whole blood with anticoagulant. Capillary or venous specimen. EDTA (purple top tube). **Instructions:** Stable at 2 to 8°C for at least one month. Submit using a Clinical Specimen Submission form. **Normal Value:** Less than 10 µg/dl **Expected Turnaround time**: 5 business days	**Yes**
Blood Lead, Diagnostic (Children)	**Description:** Quantitative lead test for the purpose of confirming childhood lead poisoning: 1. In a child with a previous elevated lead level, or 2. In a child showing signs or symptoms of lead poisoning, or 3. In a child suspected of having sustained a significant lead exposure. **Specimen:** Venous specimen only. 300 µl whole blood with EDTA anticoagulant (purple top tube). **Instructions:** Store at 2 to 8° C. Submit using a Clinical Specimen Submission form. Transport to laboratory as soon as possible in a separate package marked "Priority Lead." **Normal Value:** Less than 10 µg/dl. **Expected Turnaround time:** 2 business days	**Yes**

BIOTERRORISM RESPONSE/SPECIAL PATHOGENS		
TEST	**DESCRIPTION**	**COLLECTION & TRANSPORT KIT AVAILABLE**
Bioterrorism Agents	**Description:** Clinical isolates or primary specimens submitted for identification, confirmation, or rule-out of organisms associated with bioterrorism (*B. anthracis, Y. pestis, F. tularensis, Brucella sp.* etc.) ***Note*:** Environmental specimens are accepted only when submitted through a law enforcement agency. **Specimen:** Specimen selection criteria will vary, depending on the organism suspected. Refer to the organism specific Laboratory Response Network (LRN) Protocol www.bt.cdc.gov/labissues/index.asp for complete specimen details. If a bioterrorism agent is suspected, immediately contact HEALTH's Office of Communicable Disease by telephone at (401) 222-2577 and the Bioterrorism Response/Special Pathogens Laboratory at (401) 222-5585,86 to coordinate collection, packaging, and transport of specimens prior to any activities. For information regarding environmental specimen submission, phone either local or state law enforcement or the RI Emergency Management Agency (401) 946-9996. **Instructions:** See above. **Normal Value:** Absence of organism **Expected Turnaround time:** Varies depending on testing matrix. Contact the Bioterrorism Response Laboratory for specific times.	**Yes**

BIOTERRORISM RESPONSE/SPECIAL PATHOGENS		
TEST	**DESCRIPTION**	**COLLECTION & TRANSPORT KIT AVAILABLE**
Blood Parasites	**Description:** Detection and identification of Blood Parasites. **Specimen:** In order to test for blood parasites (Malaria, Babesia, Plasmodium, Trypanosoma, Ehrlichia, etc.), submit thin blood smears prepared in the same manner as differential smears for Hematology testing and stained with Wright/Giemsa stain. Stained thick smears may be submitted in addition to thin smears, but not instead of thin smears. Specimens must be labeled with the patient's name or other identification. Place Clinical Specimen Submission Form label on smear. **Instructions:** For specimen source, use the code for blood on the back of the Clinical Specimen Submission Form form. For test request, select "Reference Micro. Primary" on the front of the form and write the name of the parasite in question under comments. If submitting specifically for forwarding to CDC, a CDC requisition (D.A.S.H Form) must also be completed (call laboratory @ 222-5585 to obtain form). Transport stained smears in cardboard or plastic slide carriers. Place slide carrier and Clinical Specimen Submission Form into HEALTH Laboratories plastic transport bag & deliver to the laboratory. **Normal Value:** No Blood Parasites observed. **Expected Turnaround time:** 2 business days	**No**
Reference Micro Isolate	**Description:** Identification, speciation or further classification (ex. serotyping) of unusual organisms and organisms mandated by HEALTH in the *Rhode Island Epidemiology and Laboratory Reporting and Surveillance Manual.* **Specimen:** Pure isolate on appropriate media. Sealed screw cap tubes are preferred, but sealed plates are also accepted. **Instructions:** Store at room temperature. Anaerobes must be sent under anaerobic conditions to preserve organism viability and prompt delivery is required. Include a copy of all laboratory test results for the organism being submitted. Isolates being forwarded to the CDC must be accompanied by a completed CDC D.A.S.H. form (call laboratory @ 222-5585 to obtain form) in addition to the HEALTH	**No**

BIOTERRORISM RESPONSE/SPECIAL PATHOGENS		
TEST	**DESCRIPTION**	**COLLECTION & TRANSPORT KIT AVAILABLE**
Reference Micro Isolate (continued)	Laboratories Clinical Specimen Submission Form. Prior consultation with HEALTH Laboratories is required before submitting isolates of highly infectious bacteria. This includes any isolate suspected of being a bacterial agent of bioterrorism. **Normal Value:** Not applicable. **Expected Turnaround time:** Up to 8 weeks	

BIOTERRORISM RESPONSE/SPECIAL PATHOGENS		
TEST	**DESCRIPTION**	**COLLECTION & TRANSPORT KIT AVAILABLE**
Reference Micro Primary	**Description:** Primary specimen submitted for reference microbiology testing at HEALTH Laboratories or the Centers for Disease Control (CDC). **Specimen:** Varies with test request. Examples include but are not limited to the following: Acute and/or convalescent serum (separated), CSF. Submit specimens in a sealed, screw top vial. **Instructions:** Specimen selection, collection, holding and transport requirements vary with the test being requested. Prior consultation with the Bioterrorism Response/Special Pathogens unit of the HEALTH Laboratories is encouraged to confirm current test availability and proper submission requirements. Specimens to be forwarded to the CDC **must** be accompanied by a completed CDC D.A.S.H. form **in addition** to a HEALTH Laboratories Clinical Specimen Submission Form. D.A.S.H. forms are available from all hospital microbiology laboratories or from the HEALTH Laboratories Bioterrorism Response/Special Pathogens unit (222-5585). **Normal Value:** Dependent on specific test request. **Expected Turnaround time:** Varies according to test request	**No**
Pertussis	**Description:** Direct fluorescent antibody testing and culture for *Bordetella pertussis.* **Specimen:** Nasopharyngeal specimen collected on a flexible wire calcium alginate tipped swab. Submit in Regan-Lowe transport media. Throat specimens are unacceptable unless accompanied by a nasopharyngeal specimen. **Instructions:** Transport within 24 to 48 hours of collection. Hold at ambient (room) temperature. If transport is delayed beyond 48 hours, store specimen in a refrigerator at 2 to 8° C until transport. Specimens received in excess of five days from collection will be rejected. See detailed instruction sheet (next page) for additional information. **Normal Value:** DFA negative for *B. pertussis.* Culture negative for *B. pertussis.* **Expected Turnaround time:** DFA test- 1 business day, Culture- 5-17 days	**Yes**

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SPECIMEN COLLECTION PROCEDURE FOR PERTUSSIS DFA AND CULTURE

Storage

Regan-Lowe transport media is to be stored refrigerated at 2° to 8°C. Do not allow the media to freeze at any time.

Collection

1. Label the transport media with the patient's name and attach a Clinical Specimen Submission Form label. **Specimens received without the name will not be tested.**

2. Insure all information on the Clinical Specimen Submission Form is complete, legible and accurate.

3. Remove the transport media from the refrigerator. Verify that the media has not reached the expiration date. **Do not use expired media. Specimens received in expired media will be rejected.** Do not use the media if it shows signs of breakage, leakage, or contamination.

4. Allow the media to warm to room temperature for at least 15 minutes before collecting the specimen.

5. Collect the specimen under the following conditions for optimal laboratory results:
    a. Collect the specimen as early in the course of illness as possible.
    b. Collect the specimen prior to the use of antibiotics.
    c. The use of a nasal speculum is optional.

6. Collect the specimen as follows:
    a. With the patient's head stationary, the flexible calcium alginate tipped swab is gently inserted into the nostril until it reaches the posterior nares and is left in place for 30 to 60 seconds. The tickling sensation of the swab usually induces a cough. Proper placement of the swab and duration of swab exposure to the posterior nares is essential to obtain an adequate specimen.
    b. Insert the swab tip into the Reagan-Lowe transport media. The swab tip must be completely immersed in the medium for proper transport. Bend the end of the wire over the edge of the tube, and replace the cap tightly.
    c. Place the tube(s) and the Clinical Specimen Submission Form in the plastic bag provided.

Holding and Transport

Place the transport tube into the sealable side of specimen transport bag, seal bag. Place completed Clinical Specimen Submission Form in other side of bag. Package and ship all specimens according to Department of Transportation regulations (refer to Specimen Transport Instructions section of this manual for further details).

Specimens should be transported to HEALTH Laboratories **as soon as possible** after collection. Contaminating bacteria grow at a much faster rate than *B. pertussis*, and can decrease the likelihood of recovery and result into a false negative finding.

If it becomes necessary to hold a specimen prior to delivery:

1. Transport within 24 to 48 hours of collection: hold at ambient (room) temperature, 25 to 30°C.
2. If transport is delayed beyond 48 hours, refrigerate the specimen at 2° to 8° C until transport.
3. Specimens received in excess of five days from collection will be rejected.

Additional Important Information

1. Good laboratory technique cannot compensate for a poor quality specimen.

2. If possible, both nares should be cultured as this enhances the chances of recovering *B. pertussis.* A separate swab should be used for each side.

3. Only calcium alginate tipped nasopharyngeal swabs are acceptable for collection. HEALTH Laboratories provides these swabs in addition to the Regan-Lowe transport media. **Standard cotton tipped swabs are unacceptable, as they are toxic to the organism**.

4. The nasopharynx is the recommended site for culture. Throat and nasal swabs will be accepted **only when accompanied by a nasopharyngeal swab**, and must also be collected on calcium alginate swabs. A separate transport tube and Clinical Specimen Submission Form is required for **each additional source** submitted.

Kits

Kits containing instructions, transport media, and nasopharyngeal swabs are available at HEALTH Laboratories (contact the Special Pathogens Unit at 222-5585).

Reference: Manual of Clinical Microbiology, 7th ed., p.47.

8/00

MOLECULAR BIOLOGY		
TEST	**DESCRIPTION**	**COLLECTION & TRANSPORT KIT AVAILABLE**
Various Molecular Methods for Epidemiological Studies	**Description:** Molecular testing, such as Pulsed-Field Gel Electrophoresis (PFGE), Real-Time PCR and others performed to assist in the identification and epidemiological analysis of various communicable disease agents. Molecular testing is not currently provided directly to clinical laboratories. Rather, is used to support laboratory diagnosis in other areas (i.e. Bioterrorism response, Public Health Microbiology). Contact the Molecular Biology Laboratory for a current list of procedures and agents. **Specimen:** Specimen criteria will vary, depending on organism. Specimen criteria and instructions will be provided directly to clinical laboratories on an as-needed and case-by-case basis. **Instructions:** See above. **Normal Value:** Varies. **Expected Turnaround time:** Due to the complex nature of analysis, unable to specify. Contact the Molecular Biology Laboratory for further details.	**No**

MYCOBACTERIOLOGY

TEST	DESCRIPTION	COLLECTION & TRANSPORT KIT AVAILABLE
AFB Smear/Culture	**Description:** Detection and identification of *Mycobacterium* species. **Specimen:** Body Fluids: A. Blood /Bone Marrow– 10 ml. Isolator; SPS (yellow top) or Heparin (green top). **EDTA (purple top) or coagulated blood is unacceptable**. B. Bronchial Wash, Bronchial Lavage, Trans-Tracheal aspirates—5 ml. minimums. Collect sputum 1 to 2 days following bronchoscopy to enhance detection. C. Cerebrospinal Fluid (CSF), Synovial Fluid, Pleural Fluid, Peritoneal Fluid, Pericardial Fluid—2 ml.minimum D. Feces—5 ml. E. Gastric: **Collect in HEALTH Laboratories container marked "For Gastric Specimen (AFB) Only."** Gastric specimens not collected in HEALTH Laboratories kits will not be accepted without prior arrangement—5-10 ml. Must be delivered within 24 hours in HEALTH Laboratories Gastric Only Collection kit. F. Other fluids – Abscess contents, Aspirated Fluid, Skin lesion, Wound, Ascetic pus—5 ml. Minimum G. Sputum—5 ml. Minimum H. Urine – 20-50 ml. first AM midstream void. **Twenty-four-hour pooled specimens are unacceptable.** Tissue: **A.** Tissue/Biopsy, Lymph node, Skin, Other biopsy material—submit in sterile saline to cover tissue. **Specimens submitted in formalin are unacceptable.** **Instructions:** Refrigerate at 2 to 8° C. until transport. Transport at ambient (room temperature) conditions. **Must be delivered within 4 days.** Refer to Mycobacteriology Service Guide for more instructions (call 222-5587 to obtain copy).	**Yes**

MYCOBACTERIOLOGY		
TEST	**DESCRIPTION**	**COLLECTION & TRANSPORT KIT AVAILABLE**
AFB Smear/Culture (continued)	**Normal Value:** Smear – No AFB seen. Culture – *Mycobacteria* not found. **Expected Turnaround time:** Smear results-1 business day. Culture results- 56 days for Normal Value (*Mycobacteria* not found), 14-21 days for positive results. Antibiotic susceptibility results on positives only may require additional 14 days.	
Acid Fast Bacilli (AFB) Isolate	**Description:** Identification of *Mycobacterium* species. **Specimen:** Lowenstein Jensen slant, Middlebrook 7H(10/11) slant / plate or liquid media. Must be submitted within 24 hrs following isolation. **Instructions:** Pure isolate incubated at 35°C (+/-2°C) until transport. Plates and tubes must be sealed with tape or parafilm. **Normal Value:** Not applicable **Expected Turnaround time:** 1-5 days. Antibiotic susceptibility results require additional 15-35 days.	**No**

PUBLIC HEALTH MICROBIOLOGY		
TEST	**DESCRIPTION**	**COLLECTION& TRANSPORT KIT AVAILABLE**
Enteric Pathogen Screen	**Description:** Culture for the detection of enteric pathogenic bacteria. Stool specimens are routinely screened for *Salmonella, Shigella, E. coli* O157: H7 and other STEC E. coli, *Yersinia,* and *Campylobacter, Vibrio, Aeromonas and Pleasomonas* and SHIGA toxin screen. **Specimen:** Fecal specimen in Enteric Stool Kits (Cary Blair transport media, or as provided). **Instructions:** The specimen must be received in the lab within 3 days of collection. Refrigerate specimen at 2 to 8° C. if transport to the lab is delayed more than two hours. See detailed instruction sheet (following pages) for additional information. Complete a Clinical Specimen Submission Form. **Normal Value:** Negative **Expected Turnaround time:** 10 days	**Yes**
Enteric Pathogen Isolate	**Description:** Definitive identification, confirmation and/or serotype of isolates submitted as Enteric pathogens. **Specimen:** Pure subculture not more than 48 hours old in sealed screw cap slants of nutrient agar, Trypticase Soy Agar (TSA), Triple Sugar Iron (TSI) agar or Lysine Iron (LIA) agar. Isolates on plated media are acceptable if plates are sealed with tape or parafilm. Possible *Campylobacter species* isolates must be submitted on Campy Blood agar, Campy Thio, or Chocolate agar. *Campylobacter species* isolates must be submitted in a Campy transport pack and delivery must be expedited to ensure viability. **Instructions:** Store at room temperature and expedite delivery of *Campylobacter species.* Complete a Clinical Specimen Submission Form. **Normal Value:** Not applicable **Expected Turnaround time:** 14 days	**No**
Gonorrhoeae Culture	**Description:** Culture for isolation and identification of *Neisseria gonorrhoeae.* **Specimen:** Martin Lewis or Thayer Martin media inoculated from swab taken from non-urogenital site (throat, rectum, eye, etc.). In certain circumstances, such as in diagnosis of minor children, urogenital sites are	**No**

PUBLIC HEALTH MICROBIOLOGY		
TEST	**DESCRIPTION**	**COLLECTION& TRANSPORT KIT AVAILABLE**
Gonorrhoeae Culture (continued)	acceptable (contact the laboratory for more information). **Instructions:** Swab plate immediately after specimen collection. Incubate within 15 minutes of media inoculation at 35°C (+/-2°C) in CO_2 atmosphere. Transport within 48 hours in bag containing CO_2 tablet. Complete a Clinical Specimen Submission Form. **Normal Value:** Negative for *Neisseria gonorrhoeae*. **Expected Turnaround time**: 7 days	

PUBLIC HEALTH MICROBIOLOGY		
TEST	**DESCRIPTION**	**COLLECTION& TRANSPORT KIT AVAILABLE**
Gonorrhoeae Isolate	**Description:** Definitive identification of *Neisseria gonorrhoeae*. **Specimen:** Pure isolate on Martin Lewis, Thayer Martin or Chocolate agar plates or slants. Subculture submitted should be no more than 24 hours old. **Instructions:** Store at room temperature during delivery. Plates and tubes must be sealed with tape or parafilm. Complete a Clinical Specimen Submission Form. **Normal Value:** *Neisseria gonorrhoeae* not found. **Expected Turnaround time:** 7 days	**No**
Group A Strep	**Description:** Culture for the identification of Group A Streptococcus. **Specimen:** Culturette swab **Instructions:** Rub swab over infected area of the throat. Return swab to container and crush the ampule at the base of the swab container with fingers. Specimen may be stored for five days at ambient (room) temperature. See detailed instruction sheet (following pages) for additional information. Complete a Clinical Specimen Submission Form. **Normal Value:** Negative for Group A Streptococcus. **Expected Turnaround time:** 7 days	**Yes**
Norovirus (formerly Norwalk Virus)	**Description:** Viral RNA Stool Extraction/Isolation for *Norovirus*. **Specimen:** Stool specimen of at least 2 mls in clean vials, preferably with no preservative. However, specimens in Cary-Blair media collection vials are acceptable. **Instructions**: Collect specimen following the instructions (Specimen Collection Procedure for Norovirus) provided on the following pages. Complete a Clinical Specimen Submission Form. **Normal Value:** Negative for *Norovirus.* **Expected Turnaround time:** 7 days	

PUBLIC HEALTH MICROBIOLOGY		
TEST	**DESCRIPTION**	**COLLECTION& TRANSPORT KIT AVAILABLE**
Ova & Parasites (O & P)	**Description:** Concentrated wet mounts and trichrome smear. Enzyme immunoassays (EIA) for *Giardia, E. histolytica*, and *Cryptosporidium* can be performed by special request. A fluorescent microscopy test is also available by special request for *Cyclospora.* **Specimen:** Fecal material in sodium acetate-acetic acid—formalin (SAF) preservative. Unpreserved specimens for EIA test and fluorescent microscopy. **Instructions:** Store at 2 to 8° C. Preserved specimens are acceptable for up to 2 weeks after collection. A series of 3 specimens, preferably collected every other day is needed. See detailed instruction sheet (following pages) for additional information. Complete a Clinical Specimen Submission Form. **Normal Value:** No parasites found. **Expected Turnaround time:** 14 days	**Yes**
Pinworm	**Description:** Transparent tape slides for identification of pinworms. **Specimen:** Transparent tape impression of perianal folds. **Instructions:** Specimen(s) may be held for no more than five days at ambient (room) temperature. See detailed instruction sheet (following pages) for additional information. Complete a Clinical Specimen Submission Form. **Normal Value:** No pinworm found **Expected Turnaround time:** 7 days	**Yes**

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SPECIMEN COLLECTION PROCEDURE FOR
ENTERIC PATHOGEN SCREEN

Storage

The enteric pathogen screening kit contains one vial of Cary-Blair transport media (or other brand as supplied) . **Do not drink. Keep out of reach of children.** Hold kit at ambient (room) temperature (25° to 30° C) before use.

Collection

1. Label the outside of the vial with the patient's name, specimen source and attach the Clinical Specimen Submission Form label. **Specimens received without the name on vial will not be tested.**

2. Insure all information on the Clinical Specimen Submission Form is complete, legible, and accurate.

3. **Do not take a laxative** before collecting the specimen. Collect the specimen in a clean, dry, wide mouth container, such as a bedpan or wastebasket lined with a plastic bag. A clean, dry piece of newspaper or wax paper may also be used.

4. **Do not** pass specimen into the toilet.
   Do not urinate on the specimen.
   Do not attempt to pass the specimen directly into vial.

5. Use the spoon built into the vial cap or the wooden stick (if provided) to transfer small samples (about the size of a walnut) from areas that appear bloody, slimy, or watery. If specimen is firm, take sample from both ends and the middle. Continue adding specimen until the liquid level reaches the red fill line. **Mix the contents of each vial with the spoon or stick.** Recap the vial; making sure the lid is tight. Shake the vial until contents are well mixed. If the specimen is liquid, fill liquid stool to the red line on the vial label. Recap the vial making sure the lid is tight. Shake the vial until the contents are well mixed.

6. Wash hands thoroughly.

Holding and Transport

1. Specimen must be received within three days. Store in refrigerator after collection and until delivery to HEALTH Laboratories.
2. Place the vial into sealable side of specimen transport bag, seal bag. Place completed Clinical Specimen Submission Form in other side of bag. Package and ship all specimens according to Department of Transportation regulations (refer to Specimen Transport Instructions section of this manual for further details).

Kits

Kits containing Cary-Blair transport media are available at HEALTH Laboratories.
Reference: Remel technical insert, 1993
Manual of Clinical Microbiology, 7th ed., p. 48. 8/00 version.

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SPECIMEN COLLECTION PROCEDURE FOR GROUP A STREP SCREEN (THROAT)

Storage

The Group A Strep screen culturettes are held at ambient (room) temperature.

Collection

1. Label the culturette with the patient's name, specimen source and attach the Clinical Specimen Submission Form label**. Specimens received without the name on culturette will not be tested.**

2. Insure all information on the requisition is complete, legible, and accurate.

3. With light shining into the patient's throat, observe for any areas of inflammation.

4. Depress the tongue with a tongue depressor and with culturette, swab the posterior pharynx, both tonsils and any area of inflammation, ulceration, etc.

5. Avoid touching the uvula because it is heavily contaminated with normal oral flora.

6. Place the swab back in the swab holder and break the glass capsule at the bottom of the swab holder by depressing the vial between your thumb and forefinger.

Holding and Transport

1. Place the culturette into the sealable side of specimen transport bag, seal bag. Place the Clinical Specimen Submission Form in the other side of bag. Package and ship all specimens according to Department of Transportation regulations (see Specimen Transport Instructions section of this manual for further details).

2. The specimen can be stored for five days at ambient (room) temperature. Deliver to HEALTH Laboratories.

Kits

Kits containing culturettes are available at HEALTH Laboratories.

Reference: Manual of Clinical Microbiology, 7th ed., p.48.
8/00

HEALTH Laboratories
50 Orms Street
Providence RI 02904

April 2003

SPECIMEN COLLECTION PROCEDURE FOR NOROVIRUS

1. Label a sterile collection container (no preservative preferred) with the patient name, specimen source and date of specimen collection. Attach a Clinical Specimen Submission Form label. **Specimens received without the name on vial will not be tested.**

2. Instruct the patient to pass a stool specimen into a clean, dry, wide mouth container, such as a bedpan or plastic bag. Do not pass the specimen into a toilet and do not urinate in the specimen container. Also, do not take a laxative before collecting the specimen.

3. Using the spoon built into the specimen collection vial cap (if provided) or a wooden stick, transfer a portion of the specimen from areas of the stool that appear bloody, slimy or watery. If the stool specimen is firm, take a portion from both ends and the middle. Ensure that at least 2 mls of specimen (about the size of a walnut) is placed in the specimen collection vial.

4. Place the specimen collection vial into a specimen transport bag and seal it.

5. Wash hands thoroughly.

6. Complete a Clinical Specimen Submission Form, ensuring that all of the information is complete, legible and accurate. Place this form in the other side of the specimen transport bag (not with the specimen).

7. Store at 4° C until delivery to laboratory. Do not freeze specimen.

Reference: Centers for Disease Control (CDC)

HEALTH Laboratories
50 Orms Street
Providence RI 02904

April 2003

SPECIMEN COLLECTION PROCEDURE FOR OVA AND PARASITES

Storage

The parasitology kit contains two vials, one containing preservative, and one empty. They are held at ambient (room) temperature (25° to 30°C) before use.

Collection

1. Label both vials with patient name, specimen source and date of specimen collection and attach a Clinical Specimen Submission Form label. **Specimens received without the name on vial will not be tested.**

2. Insure all information on the Clinical Specimen Submission Form is complete, legible, and accurate.

3. A series of three specimens, preferably collected every other day is needed for an adequate examination. Post therapy, three specimens collected as above is needed to confirm efficacy. Very watery specimens may require more specimens due to the dilution effect.

4. Collection of fecal specimens for intestinal parasites should always be collected prior to any antacids, barium, bismuth, antidiarrheal medication, or oily laxatives.

5. Collect specimen in a clean, dry, wide mouthed container, such as a bedpan or a wastebasket lined with a plastic bag. A clean, dry piece of newspaper or wax paper may also be used.

6. **Do not** pass the specimen into the toilet.
   Do not urinate on the specimen.
   Do not attempt to pass the specimen directly into the vial.

7. Use the spoon built into the cap or the wooded stick (if provided) to transfer small samples (about the size of a walnut) from areas that appear bloody, slimy, or watery. If specimen is firm, take samples from both ends and the middle. In vial containing liquid preservative, add sample until the liquid level reaches the red line on the label. For dry vials, fill ¼ to ½ of vial and replace cap. Specimen must be placed in the Sodium Acetate-acetic acid-formalin (SAF) vial within 1 hour.

8. In the vial containing liquid, **mix feces and liquid with the spoon or stick**. Replace the cap on the vial securely and shake until contents are well mixed.

9. Wash hands thoroughly.

SPECIMEN COLLECTION PROCEDURE FOR OVA AND PARASITES (continued)

Holding and Transport

1. Place both vials into sealable side of specimen transport bag, seal bag. Place completed Clinical Specimen Submission Form in other side of bag. Package and ship all specimens according to Department of Transportation regulations (see Specimen Transport Instructions section of this manual for further details).

2. Transport as soon as possible. Store in refrigerator after collection until delivery to HEALTH Laboratories.

Additional Important Information

Do not drink any of the preservative (liquid) in the vial. Antidote: In case of skin or eye Contacts, flush with warm water, if irritation persists, contact a physician. In case of swallowing, call physician immediately. If conscious, give milk or egg whites beaten with water. Induce vomiting with a glass of warm salt water. Repeat until vomit is clear.

Kits

Kits containing instructions and vials are available at HEALTH Laboratories.

Reference: Manual of Clinical Microbiology, 6th ed., 1995, Chapter 102.

8/00

HEALTH Laboratories
50 Orms Street
Providence RI 02904

April 2003

SPECIMEN COLLECTION PROCEDURE FOR PINWORM SCREEN

Collection

1. Label the microscope slide with the patient's name and attach a Clinical Specimen Submission Form label. **Specimens received without patient's name on slide will not be tested.**

2. Insure all information on the Clinical Specimen Submission Form is complete, legible, and accurate.

3. Specimens must be collected between the time a child is asleep for the night and before the child goes to the bathroom in the morning.

4. **Use only TRANSPARENT TAPE.** Touch the sticky side of transparent tape to the exterior surface of the rectum (perianal folds). Stick the tape to the slide (sticky side down) such that the patient's name is readable on the same side as the tape is affixed.

5. **Do not** collect stool (feces) on the transparent tape.

6. Four specimens collected on successive days are required to rule out pinworm infection.

7. Place the slide into a cardboard or plastic slide carrier.

Holding and Transport

Place the slide carrier into sealable side of specimen transport bag, seal bag. Place the completed Clinical Specimen Submission Form in other side of bag. Package and ship all specimens according to Department of Transportation regulations (see Specimen Transport Instructions section of this manual for further details).

Specimens may be held at ambient (room) temperature until all four specimens have been collected. The specimens should then be transported to HEALTH Laboratories. Do not hold the specimens for more than five days from the time of collection.

Reference: Manual of Clinical Microbiology, 7th ed., pp.59, 1421-1422.

8/00

SEROLOGY		
TEST	**DESCRIPTION**	**COLLECTION & TRANSPORT KIT AVAILABLE**
Arbovirus	**Description:** An enzyme-linked immunosorbent capture assay to detect antibodies (IgM & IgG) to arboviruses, specifically West Nile Virus. **Specimen:** Whole blood, minimum 4 ml in a red top tube shipped on a cold pack. Spinal fluid (non-hemolyzed), minimum 1 ml shipped on a cold pack. **Instructions:** Prior to testing, approval by Epidemiology (222-2577) is required. Spinal fluid and serum must be kept at 4° to 8° C for up to 48 hours. Complete a Clinical Specimen Submission Form. The Serology lab (222-5591) must be notified prior to shipping. **Normal Value:** Negative **Expected Turnaround time:** 5 business days	**No**
Chlamydia & Gonorrhoeae	**Description:** A nucleic acid amplification test to detect *Chlamydia trachomatis* and *Neisseria gonorrhoeae* in endocervical and urethral sites only. **Since the test is not approved for sites other than endocervical and urethral, specimens received from other sites will be rejected.** **Specimen:** Endocervical or urethral swabs. **Instructions:** Closely follow collection instructions printed on each specimen collection package (swab). Specimen may be held and transported to the lab at 2 to 30° C. Specimen must be received in the lab within 60 days of collection. Specimens can be stored at room temperature, refrigerated or frozen. . Complete a Clinical Specimen Submission Form. **Normal Value:** Negative **Expected Turnaround time:** 3 business days	**Yes**
Human Immunodeficiency Virus (HIV)	**Description:** Enzyme Immunoassay (EIA) performed as a screening test to detect antibody to HIV-I and II. A Western Blot and Immunofluorescent Antibody (IFA) confirmatory test will automatically be run on specimens with two positive screening results at no additional charge. **Specimen:** Blood, 3-8 ml. in 16 x 100 red top tube or at least 2 ml. of separated serum. **Instructions:** Stable at 2 to 8° C for one week. Use the HIV Serology Test Form and follow the instructions on the back of the form. Place only the specimen identification label on the specimen. Specimens will be rejected if the patient's name is placed on the HIV Serology Test Form or specimen. **Normal Value:** Negative **Expected Turnaround time**: EIA (screening test)- 2 business days,	**No**

SEROLOGY		
TEST	**DESCRIPTION**	**COLLECTION & TRANSPORT KIT AVAILABLE**
Human Immunodeficiency Virus (HIV) (continued)	Western Blot & IFA (confirmatory test)- 3 additional business days. Health Care Worker exposures will be expedited; contact Serology (222-5591) for additional instructions.	

SEROLOGY		
TEST	**DESCRIPTION**	**COLLECTION & TRANSPORT KIT AVAILABLE**
Mumps	**Description:** Detection of antibody to the mumps virus by Enzyme Immunoassays (EIA). **Specimen:** Blood, 3-8 ml. in 16 x 100 red top tube or at least 2 ml. of separated serum. **Instructions:** Prior approval by the Division of Disease Prevention and Control (222- 2577) is required. Stable at 2 to 8° C for one week. Complete a Clinical Specimen Submission Form. **Normal Value:** The presence of IgM class antibodies or a fourfold or greater rise in paired sera IgG titer indicates recent infection. The presence of demonstrable IgG generally indicates past exposure and immunity. **Expected Turnaround time:** 1 business day	**No**
Rubella	**Description:** Detection of antibody to rubella by Enzyme Immunoassay (EIA). **Specimen:** Blood, 3-8 ml. in 16 x 100 red top tube or at least 2 ml. of separated serum. **Instructions:** Specimen may be held at 2 to 8° C for 5 days until transport. Complete a Clinical Specimen Submission Form. **Normal Value:** Immune indicates past exposure or immunization against rubella. **Expected Turnaround time**: 5 business days	**No**
Rubeola	**Description:** Detection of IgM and IgG antibody to rubeola (measles) by Enzyme Immunoassay (EIA). **Specimen:** Blood, 3-8 ml. in 16 x 100 red top tube or at least 2 ml. of separated serum. **Instructions:** Prior approval by the Division of Disease Prevention and Control (222- 2577) is required. Specimen may be held at 2 to 8° C for 5 days until transport. Complete a Clinical Specimen Submission Form. **Normal Value:** The presence of IgM class antibodies or a fourfold or greater rise in paired sera IgG titer indicates recent infection. The presence of demonstrable IgG generally indicates past exposure and immunity. **Expected Turnaround time:** 1 business days	**No**
Syphilis	**Description:** The Rapid Plasma Reagin (RPR) card test is a non-treponemal, macro flocculation test for syphilis used qualitatively for screening and quantitatively to monitor treatment response to the disease. All reactive RPR tests are titered to an endpoint. A Fluorescent Treponemal Antibody—Absorption (FTA-ABS) test is a confirmatory test for syphilis performed on all reactive RPR tests.	**No**

SEROLOGY		
TEST	**DESCRIPTION**	**COLLECTION & TRANSPORT KIT AVAILABLE**
Syphilis (continued)	**Specimen:** Blood, 3-8 ml. in 16 x 100 red top tube or at least 2 ml. of separated serum. Patients should not have eaten for one hour prior to collection. **Instructions:** Stable at 2 to 8° C for one week. Complete a Clinical Specimen Submission Form. **Normal Value:** Non-reactive **Expected Turnaround time:** RPR (screening test)- 3 business days, FTA-ABS (confirmatory test)- 3 additional business days	
Syphilis -Spinal Fluid	**Description:** The Venereal Disease Research Laboratories (VDRL) method is performed on cerebrospinal fluid only. This test is a qualitative and quantitative micro flocculation test for syphilis. Reactive VDRL tests are titered to an endpoint. **Specimen:** A minimum of 0.5ml of centrifuged cerebrospinal fluid. **Instructions:** Stored at 2 to 8° C until testing. Complete a Clinical Specimen Submission Form. **Normal Value:** Non-reactive **Expected Turnaround time:** 3 business days	**No**

VIROLOGY		
TEST	**DESCRIPTION**	**COLLECTION & TRANSPORT KIT AVAILABLE**
Virology Agents	**Description:** Virology testing including cell culture, PCR, etc. to detect virological agents of disease including West Nile Virus, Rabies, etc. Contact the Virology Laboratory for a current list of available testing. **Specimen:** Specimen criteria will vary, depending on organism. Specimen criteria and instructions will be provided directly to clinical laboratories on an as-needed and case-by-case basis. **Instructions:** See above. **Normal Value:** Varies. **Expected Turnaround time:** Due to the complex nature of analysis, unable to specify. Contact the Virology Laboratory for further details.	**No**